What is claimed is:

1. A lenticular lens sheet for use in a rear projection screen that allows imaging light emitted from an image source, the imaging light being incident on a rear of the screen, to emerge toward a viewer's side, comprising:

a plurality of lens elements of incidence arranged on an incidence side; and

a plurality of lens elements of emergence arranged on an emergence side,

wherein a light that has passed through each of the lens elements of incidence converges via a protruding apex of a corresponding lens element of emergence;

a lens plane of a center portion of each of the lens elements of emergence, a width of the center portion being a half of a total lens width, is in a shape defined by a curved line fulfilling the conditions expressed by the following numerical formulae (1) to (4):

$$y = a \times b^{-X} - e \quad (-L/4 \leq x \leq 0) \quad \cdots \quad (1),$$
$$y = a \times b^{X} - e \quad (0 \leq x \leq L/4) \quad \cdots \quad (2),$$
$$3.0 \times 10^{-4} < a < 3.8 \times 10^{-4} \quad \cdots \quad (3), \text{ and}$$
$$1.0 \times 10^{24} < b < 1.0 \times 10^{25} \quad \cdots \quad (4);$$

a lens plane of each side portion of each of the lens elements of emergence, a width of the each side portion being a quarter of the total lens width, is in a shape defined by a curved line fulfilling the conditions expressed by the following numerical formulae (5) to (8):

$$y = c \times d^{-X} - e \quad (-L/2 \leq x \leq -L/4) \quad \cdots \quad (5),$$
$$y = c \times d^{X} - e \quad (L/4 \leq x \leq L/2) \quad \cdots \quad (6),$$
$$3.0 \times 10^{-3} < c < 3.1 \times 10^{-3} \quad \cdots \quad (7), \text{ and}$$
$$2.7 \times 10^{9} < d < 4.0 \times 10^{9} \quad \cdots \quad (8); \text{ and}$$

the curved lines defining the shape of the lens plane of each of the lens elements of emergence, given by the above numerical formulae (1) to (8), are on the x-y coordinates, and in these numerical formulae, x denotes the coordinate axis passing through both ends of the lens element of emergence, extending in a direction of the width of this lens element, y denotes the coordinate axis crossing the protruding apex of the lens element of emergence, the positive direction of the y-coordinate

axis being from the viewer's side toward the image source side, L is a distance between the two ends of the lens element of emergence, a, b, c and d are coefficients, and e is an intercept between the curved line and the y-coordinate axis and is a coefficient relating to a height of the lens element of emergence.

2. The lenticular lens sheet according to claim 1, wherein the lens plane of each of the lens elements of incidence is in a shape defined by a curved line fulfilling the conditions that are the same over an entire lens width.

3. The lenticular lens sheet according to claim 2, wherein the lens plane of each of the lens elements of incidence is in a shape defined by a curved line given by the following numerical formulae (13) to (16):

$y' = mx'^4 + nx'^2 + o \quad (-L'/2 \leq x \leq L'/2) \quad \cdots \quad (13),$

$-5.5 \leq m \leq -10.7 \quad \cdots \quad (14),$

$-2.0 \leq n \leq -2.5 \quad \cdots \quad (15),$ and

$0.160 \leq o \leq 0.200 \quad \cdots \quad (16);$ and

the curved line defining the shape of the lens plane of each of the lens elements of incidence, given by the above numerical formulae (13) to (16), is on the x'-y' coordinates, and in these numerical formulae, x' denotes the coordinate axis passing through both ends of the lens element of incidence, extending in a direction of a width of this lens element, y' denotes the coordinate axis crossing a protruding apex of the lens element of incidence, the positive direction of the y'-coordinate axis being from the viewer's side toward the image source side, L' is a distance between the two ends of the lens element of incidence, m and n are coefficients, and o is an intercept between the curved line and the y'-coordinate axis and is a coefficient relating to a height of the lens element of incidence.

4. The lenticular lens sheet according to claim 1, wherein the image source is three-tube-type projection tubes for red, green and blue colors.

5. The lenticular lens sheet according to claim 1, wherein shown is a gain of not more than 5.0 dB at a viewing angle between –45° and

+45° in a color shift curve drawn by plotting vertically proportions of gains for red light G_R to gains for blue light G_B ($20 \times \log_{10}(G_R/G_B)$), these gains being obtained from a gain chart that shows properties of letting light emerge in the lenticular lens sheet.

6. A lenticular lens sheet for use in a rear projection screen that allows imaging light emitted from an image source, the imaging light being incident on a rear of the screen, to emerge toward a viewer's side, comprising:

a plurality of lens elements of incidence arranged on an incidence side; and

a plurality of lens elements of emergence arranged on an emergence side,

wherein a light that has passed through each of the lens elements of incidence converges via a protruding apex of a corresponding lens element of emergence;

a lens plane of a center portion of each of the lens elements of emergence, a width of the center portion being a half of a total lens width, is in a shape defined by a curved line fulfilling the conditions expressed by the following numerical formulae (1) to (4):

$$y = a \times b^{-x} - e \quad (-L/4 \leq x \leq 0) \quad \cdots \quad (1),$$

$$y = a \times b^{x} - e \quad (0 \leq x \leq L/4) \quad \cdots \quad (2),$$

$$3.0 \times 10^{-4} < a < 3.8 \times 10^{-4} \quad \cdots \quad (3), \text{ and}$$

$$1.0 \times 10^{24} < b < 1.0 \times 10^{25} \quad \cdots \quad (4);$$

a lens plane of each side portion of each of the lens elements of emergence, a width of the each side portion being a quarter of the total lens width, is in a shape defined by a curved line fulfilling the conditions expressed by the following numerical formulae (9) to (12):

$$y = c \times d^{-x} - e \quad (-L/2 \leq x \leq -L/4) \quad \cdots \quad (9),$$

$$y = c \times d^{x} - e \quad (L/4 \leq x \leq L/2) \quad \cdots \quad (10),$$

$$3.4 \times 10^{-3} < c < 3.5 \times 10^{-3} \quad \cdots \quad (11), \text{ and}$$

$$1.3 \times 10^{9} < d < 2.0 \times 10^{9} \quad \cdots \quad (12); \text{ and}$$

the curved lines defining the shape of the lens plane of each of the lens elements of emergence, given by the above numerical formulae (1) to (4) and (9) to (12), are on the x-y coordinates, and in these numerical formulae, x denotes the coordinate axis passing through both

ends of the lens element of emergence, extending in a direction of the width of this lens element, y denotes the coordinate axis crossing the protruding apex of the lens element of emergence, the positive direction of the y-coordinate axis being from the viewer's side toward the image source side, L is a distance between the two ends of the lens element of emergence, a, b, c and d are coefficients, and e is an intercept between the curved line and the y-coordinate axis and is a coefficient relating to a height of the lens element of emergence.

7. The lenticular lens sheet according to claim 6, wherein the lens plane of each of the lens elements of incidence is in a shape defined by a curved line fulfilling the conditions that are the same over an entire lens width.

8. The lenticular lens sheet according to claim 7, wherein the lens plane of each of the lens elements of incidence is in a shape defined by a curved line given by the following numerical formulae (13) to (16):

$$y' = mx'^4 + nx'^2 + o \quad (-L'/2 \leq x \leq L'/2) \quad \cdots \quad (13),$$
$$-5.5 \leq m \leq -10.7 \quad \cdots \quad (14),$$
$$-2.0 \leq n \leq -2.5 \quad \cdots \quad (15), \text{ and}$$
$$0.160 \leq o \leq 0.200 \quad \cdots \quad (16); \text{ and}$$

the curved line defining the shape of the lens plane of each of the lens elements of incidence, given by the above numerical formulae (13) to (16), is on the x'-y' coordinates, and in these numerical formulae, x' denotes the coordinate axis passing through both ends of the lens element of incidence, extending in a direction of a width of this lens element, y' denotes the coordinate axis crossing a protruding apex of the lens element of incidence, the positive direction of the y'-coordinate axis being from the viewer's side toward the image source side, L' is a distance between the two ends of the lens element of incidence, m and n are coefficients, and o is an intercept between the curved line and the y'-coordinate axis and is a coefficient relating to a height of the lens element of incidence.

9. The lenticular lens sheet according to claim 6, wherein the image source is three-tube-type projection tubes for red, green and blue colors.

10. The lenticular lens sheet according to claim 6, wherein shown is a gain of not more than 5.0 dB at a viewing angle between $-45°$ and $+45°$ in a color shift curve drawn by plotting vertically proportions of gains for red light G_R to gains for blue light G_B ($20 \times \log_{10}(G_R/G_B)$), these gains being obtained from a gain chart that shows properties of letting light emerge in the lenticular lens sheet.